Processed Apples Institute

January 21, 2002

Lydia E. Berry, Marketing Specialist
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Processed Products Branch, Fruits and Vegetable Programs
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via e-mail
lydia.berry@usda.gov
and U.S. mail

Subject: "United States Standards for Grades of Apple Juice from Concentrate"
66 Federal Register 58430 November 21, 2001

Dear Ms. Berry:

In response to your January 29 letter to Mr. Larry Davenport of the Processed Apples Institute (PAI) (I have succeeded him as President) and in response to the Federal Register notice described above, PAI files the following comments:

As noted in the Supplementary Information section to the Federal Register Notice, the Processed Apples Institute requested by way of a letter dated May 28, 1996 that USDA develop a standard for Apple Juice from Concentrate and provided information describing product and giving suggestions as to the content of the standard.

In the interval following, technology of juice production has continued to evolve. PAI limits its comments to the technical aspects of the draft standard. They are of sufficient scope so that timely publication of redrafted standards may be in order. Our members recognize that the proposed standard may need be recast, supplemented or supplanted by, for example, a USDA Grade Standard for Apple Juice Concentrate. Should events dictate that further standards development is required, PAI members would be pleased to participate and would desire to do so.

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PAI's specific comments on the Draft Standard are attached. We appreciate having this opportunity to comment.

Sincerely,

Andrew G. Ebert
President

Attachment

cc: PAI Board of Directors
PAI Technical Committee

PAI Comments --- Apple Juice from Concentrate Standard

Section 52xxx Product Description

(a) Apple Juice from Concentrate

Delete "from the first pressing of" in line 1.

(e) Good Flavor and Aroma

Brix/Acid Ratios

Brix/acid ratios are commonly used in the citrus industry, but are not used by apple processors. Delete ratio specifications and utilize separate standards for Brix and acid levels as proposed in PAI's draft standard. If Brix/acid ratios are retained, corrections in values are needed as listed below.

Section 52.308 Requirements

Table I. Style I Clear.

Absence of Defects. The draft Standard does not carry an objective measurement of turbidity by nephelometry for Grades A and B. PAI believes an objective measurement is practical and should be considered. Values of <10 NTU and < 20 NTU for Grades A and B of Style I should be incorporated and sent out for comment.

Analytical

Acid – Calculated as Malic

PAI questions the accuracy of the minimum and maximum values given. For Grade A Apple Juice, the Brix/acid ratios range from 21:1 to 53:1. At 11.5 degrees Brix, PAI believes the stated minimum acid should therefore be 0.22 g acid/100 g (w/w) (not 0.24 g/100 g). Similarly, at a minimum of 21:1 Brix/acid ratio, the maximum acid should be 0.55 g acid/100 g (w/w) of juice (not 0.67).

Palatability of 0.67 g/100 g acid --- maximum in Grade A product

PAI now questions if the maximum level may be too high, yielding an unpalatable product. A maximum in the order of 0.55g/ 100 g or equivalent may be in order.

Acid Content

Some choose to express acid content on a w/v basis. On a g/100 ml basis, corresponding values differ slightly.

If incorporated into a standard:

0.24 g/100 g (w/w) becomes 0.25 g/100 ml (w/v)
0.22 g/100 g (w/w/) becomes 0.23 g/100 ml (w/v)

Grade Requirement

In addition to the subjective measurements used to measure color, clarity and the absence of defects, objective measures should be considered as well, including nephelometry and measurement of light transmittance spectrophotometrically.

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